COMPRO
TECHNOLOGY

Dome Network Camera

Installation Guide

Before attempting to set up or operate this camera, please read this quick installation guide and retain it for future reference.

Model No.

NC3230

V3-120831
P/N: 3GA0310817

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Important Notices

Regulatory Notice

This device complies with Part 15 of the FCC Rules. Operation is subject to the following two conditions: (1) This device may not cause harmful interference, and (2) This device must accept any interference received, including interference that may cause undesired operation.

FCC Interference Statement

This equipment has been tested and found to comply with the limits for a Class B digital device, pursuant to Part 15 of the FCC Rules. These limits are designed to provide reasonable protection against harmful interference in a residential installation.

This equipment generates, uses and can radiate radio frequency energy and, if not installed and used in accordance with the instructions, may cause harmful interference to radio communications. However, there is no guarantee that interference will not occur in a particular installation. If this equipment does cause harmful interference to radio or television reception, which can be determined by turning the equipment off and on, the user is encouraged to try to correct the interference by one of the following measures:

- Reorient or relocate the receiving antenna.
- Increase the separation between the equipment and receiver.
- Connect the equipment into an outlet on a circuit different from that to which the receiver is connected.
- Consult the dealer or an experienced radio/TV technician for help.

To assure continued compliance, any changes or modifications not expressly approved by the party responsible for compliance could void the user's authority to operate this equipment.

Safety Rules

- The camera ought to be installed by a qualified technician.
- Place the camera on a level surface whenever possible.
- Do not drop the camera body to the ground; it may cause the damage to main parts.
- Please do not disassemble or remodel the product; it may cause damage or fire.
- Do not shake, move or disturb the camera when it is in operation, as such actions may result in the malfunction of the device.
- Power off the camera as soon as it is found smoking or smelt unusual.
- Please do not place the camera around the heat sources, such as television or microwave oven.

Product Overview

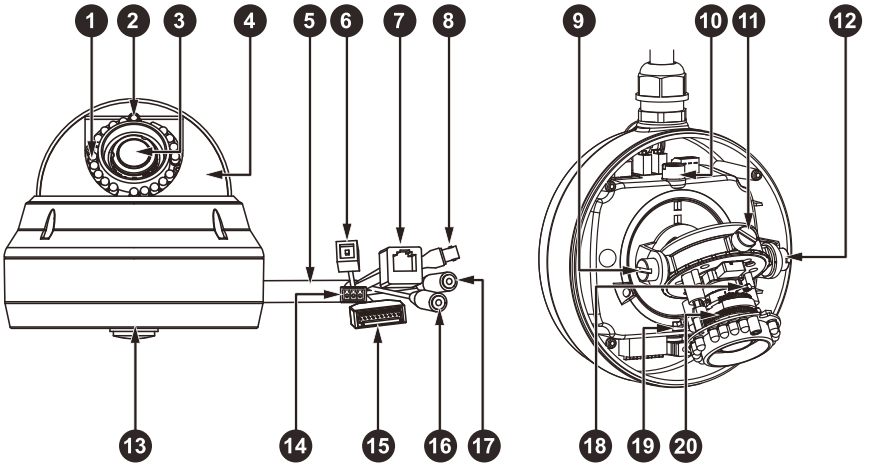
Package contents

The following is a list of items included in the package. Please check the package contents on your hand. If anything is missing, please don't hesitate to contact your local distributor.

Qty	Item	Description
1	Network camera	Compro NC3230 dome network camera
3	Hex cap screw	For use with the hexagon nuts to mount the camera on a rack rail
3	Spring washer	For use with the included hex head screws and the Phillips-head screws
3	Plain washer	For use with the hex head screws
3	Hexagon nut	For use with the hex cap screw to mount the camera on a rack rail
1	3-pin power terminal block	For connecting power
1	10-pin IO terminal block	For connecting IO devices
1	User's guide	Providing instructions on installation
1	Drill template	For aiding in dropped ceiling mount

Hardware Overview

Camera Layout

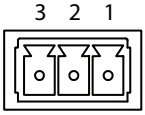


No.	Name	Description
1	IR LED	Provides additional lighting in low light conditions
2	Ambient light sensor	Feeds information on environmental lighting condition to the camera
3	Lens	Vari-focal, f 3~9 mm, F1.2~2.1, auto iris, megapixel, IR-corrected
4	Lens hood	For eliminating unnecessary light; direction adjustable
5	All-in-one terminal cable	Intergrating power, IO, Ethernet, BNC, and audio cable, plus a reset control
6	Reset button	Press and hold the reset button for about 8 seconds to reset the camera back to factory defaults
7	Ethernet port	For connection to a PoE or Non-PoE network switch/ router
8	BNC out	For connecting to a standard TV with BNC input (only for live viewing purpose)
9	Tilt adjustment screw	For holding the tilting position of the camera

No.	Name	Description
10	Pan adjustment screw	For holding the panning position of the camera
11	Rotation adjustment screw	Loosen the screw to rotate the lens
12	Tilt adjustment screw	For holding the tilting position of the camera
13	Screw holes (on the bottom) for wall mount bracket	For installing the wall mount bracket
14	Power connector	A 3-pin power connector
15	I/O connector	For connection with various I/O devices
16	MIC in (pink)	For connecting to an external microphone
17	Audio out (green)	For connecting to an external speaker
18	Zoom lever	Move the zoom lever between Wide and Tele to adjust the angle of view
19	LED status indicator	Indicating system status
20	Focus adjustment ring	Turn the focus adjustment ring to adjust the focus

Power Connector Pinout

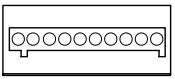
The following table indicates the pinout of the camera's terminal power connector.



Pin	Function
1	+ 12V DC
2	COM
3	24V AC

Digital I/O Connector Block

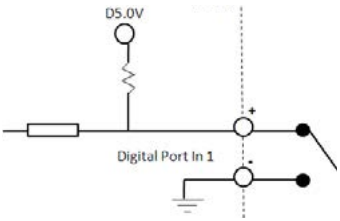
The digital inputs are normally used with security sensors, e.g. passive infrared sensors (PIR), smoke detectors, etc. They work by detecting a change in the state of open and closed circuit. The output ports are normally used to trigger external audio or visual indicators, e.g. sirens or strobe lights, etc.

Pin	Function	Specifications	Note	Pinouts
1	Digital Input Port 1 (IN +)	Max. 5V DC, 60mA	Floating, TTL	 1 2 3 4 5 6 7 8 9 10
2	Digital Input Port 1 (IN –)			
3	Digital Input Port 2 (IN +)			
4	Digital Input Port 2 (IN –)			
5	Digital Output Port 1 (NO)	Max. 24V DC, 1 A; or Max. 125V AC, 1A	You can only use either the Normally Open (NO) or the Normally Closed (NC) at any given time	
6	Digital Output Port 1 (COM)			
7	Digital Output Port 1(NC)			
8	Digital Output Port 2 (NO)			
9	Digital Output Port 2 (COM)			
10	Digital Output Port 2 (NC)			

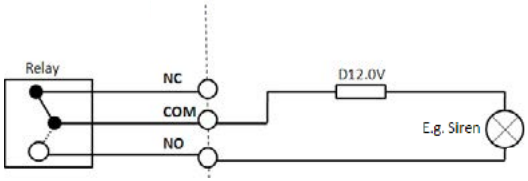
Schematic Connection Diagram

The following output scenario is where the siren will only sound when the input has been triggered. Should you wish to use the other way around in which the output device keeps staying on until the input has been triggered, please use NC.

Digital In port:



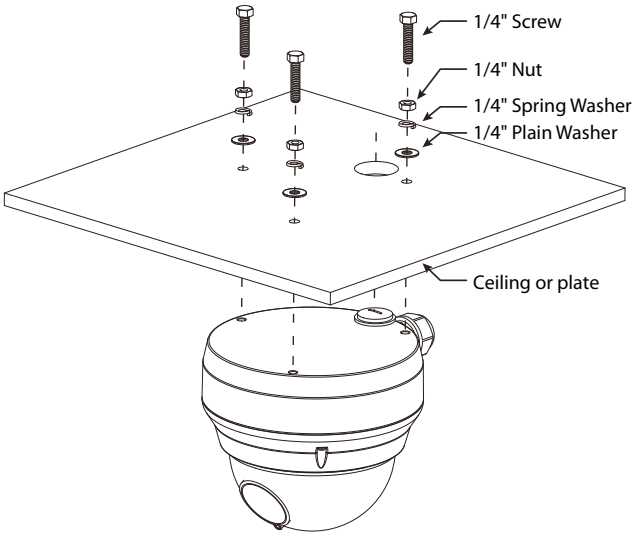
Digital Out port:



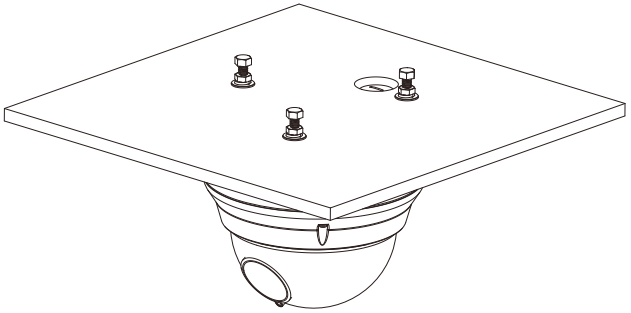
Mounting on a Dropped Ceiling

Before you mount the camera on a dropped ceiling, you must first ensure that the ceiling is robust enough to hold the weight of the camera. Then refer to the following steps.

1. Use the supplied drill template to drill three mounting holes on the ceiling. Then drill a hole for the camera's protective cap.
2. Secure the camera to the ceiling using the supplied hex cap screws and hexagon nuts. Make sure you use a spring washer and a plain washer in between the nut and the ceiling (with the spring washer below the nut).

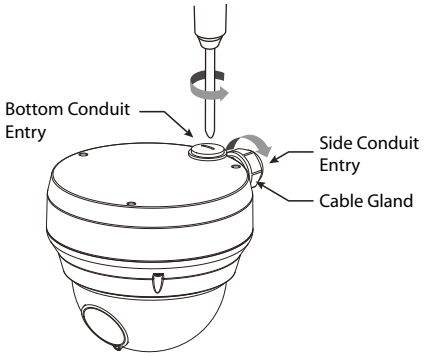


3. Ensure the screws are securely tightened. Then, if you need to run the cable through the ceiling, drill a cable hole on the ceiling and then thread the camera's terminal cable through the cable hole.



Re-routing Terminal Cable

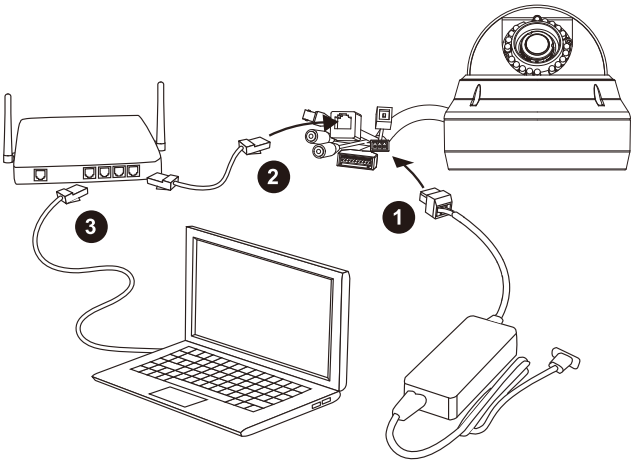
If necessary, you can have the terminal cable exit from the bottom of the camera. To do so, remove the camera's top cover first and go ahead to detach the entire terminal cable , along with the plastic cable gland, from the camera. Then unscrew the plastic conduit entry cover on the bottom. Fasten the plastic cable gland to the bottom conduit entry, and thread the terminal cable through the bottom conduit entry, and then connect the cables to the camera's connectors. Finally, screw the plastic cover you've removed from the camera's bottom into the side conduit entry.



Connect the Cables

Basic Cabling

The figure below shows the basic cabling of your IP camera.



1. **LAN cable from PC to hub/router:** If your LAN cable from PC has been connected

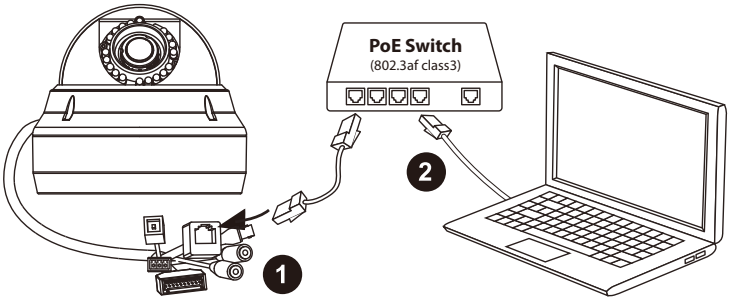
to the Cable/ADSL modem, please re-connect it to the Ethernet port of your network hub/router.

2. **Ethernet port on camera:** Use a RJ-45 LAN cable to connect the Ethernet port of the IP camera to the Ethernet port of your network hub/router.
3. **Power adapter (optional accessory):** Attach the power adapter to the camera's power connector when you are not using the camera's PoE function. Then connect the power plug to a power outlet. If you intend to use PoE (Power-over-Ethernet) to power the camera, refer to the next section.

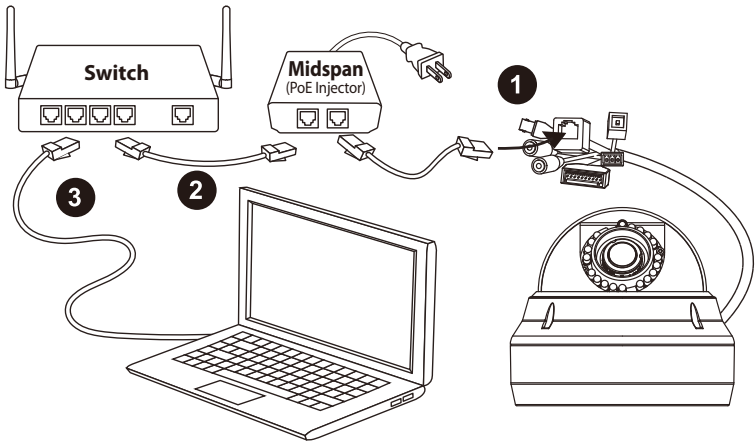
Connect Camera Using PoE

This camera supports PoE (Power-over-Ethernet), which allows electrical power and IP data to be both delivered on a single Ethernet cable. The following instructions explain how to connect your network camera using PoE.

1. **Using PoE Switch:** If the Ethernet ports on your network switch/router support PoE (Power-over-Ethernet), you can directly connect the Ethernet port of the network camera to the PoE port of your network switch/router to power the camera.



2. **Using Non-PoE Switch:** If you are using the camera with a non PoE capable network switch/router, yet you still want to use PoE to power the camera, you need to prepare a PoE injector (or midspan, not supplied) first and then connect the camera to a Non-PoE network switch through a PoE injector.



Install Camera Software

Prior to installing camera software, make sure you have powered on the Compro IP Camera installed in your home/office network.

To begin software installation, insert the installation CD included in the package into the CD-ROM drive of your viewing PC. Make sure your Compro IP camera connects to the same home/office network that your viewing PC connects to. Then the Compro iWizard setup utility will start automatically to guide you through the installation process. If the iWizard doesn't start on its own, browse the contents of the installation CD and double-click on the "iWizard.exe" file to run the setup wizard. (Note if you are running Windows 7/ Vista, you need to run iWizard tool with system administrator rights. Simply right click on the iWizard icon on your desktop, and select "Run as administrator")

After the Compro iWizard is launched, select the displayed language first. Then click [IP Camera Setup] and select the camera model you wish to install, and follow the on-

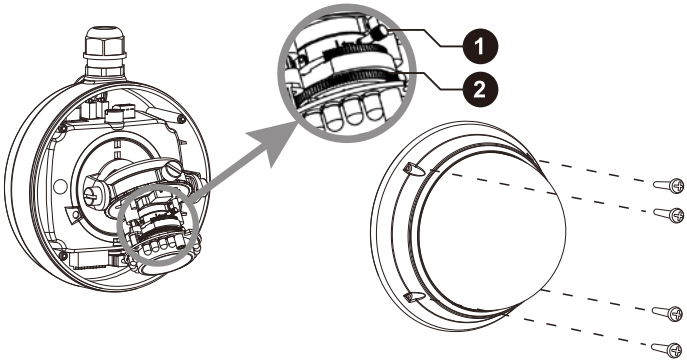
screen instructions to complete the software installation.

Adjust the Image

Follow the instructions below to adjust the camera's varifocal lens.

Adjust Zoom and Focus

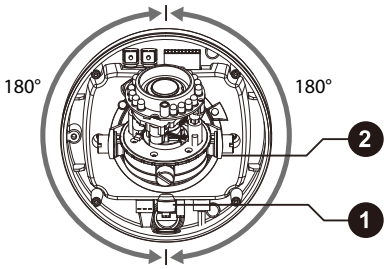
1. To adjust the zoom and focus, first remove the protection sheet from the top cover, and then loosen the fixing screw on the top cover to remove the top cover.
2. Loosen the zoom lock lever (labeled ❶ in below figure) and move the lever to adjust the angle of view. Then tighten the zoom lock lever.
3. Loosen the lock screw on the focus ring and then turn the focus ring (labeled ❷) clockwise or counterclockwise to adjust the focus. After obtaining a satisfying result, tighten the lock screw and re-install the top cover.



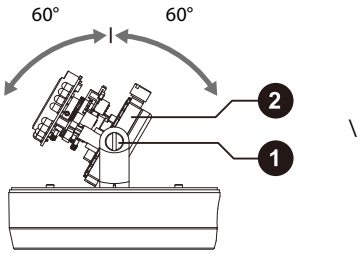
Adjust Pan/Tilt/Rotation

To adjust the camera's panning or tilting position, or to rotate the lens (for horizon alignment), please remove the top cover first and then follow the steps below.

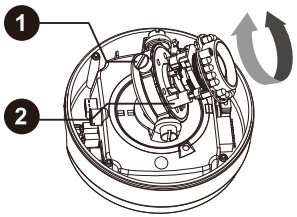
1. Loosen the pan adjustment screw (labeled ❶ in below figure) and then rotate the lens holder (labeled ❷ in below figure) to adjust the camera's panning position. The pan adjustment range is between +180 degrees to -180 degrees.
2. Tighten the pan adjustment screw and then, if necessary, go on to adjust the tilting position.



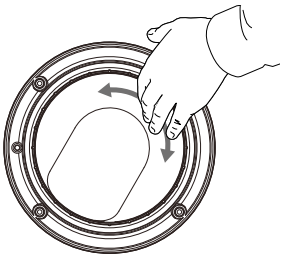
3. Loosen the tilt adjustment screw (labeled 1 in below figure) on both sides and then tilt the lens holder (labeled 2 in below figure) to adjust the camera's tilting position. The tilt adjustment range is between +60 degrees to -60 degrees.
4. Tighten the tilt adjustment screws and then, if desired, go on to adjust the rotation of the camera image.



5. Loosen the rotation adjustment screw (labeled 1 in below figure). Then grab the lens holder by the holder boss (labeled 2 in below figure) on both sides and rotate the lens holder clockwise or counterclockwise to adjust the horizon in the live image. The rotation adjustment range is between +180 degrees to -180 degrees. Tighten the rotation adjustment screw when completed.



6. Rotate the lens hood inside the top cover so the opening in the lens hood is aligned with the camera's new position.

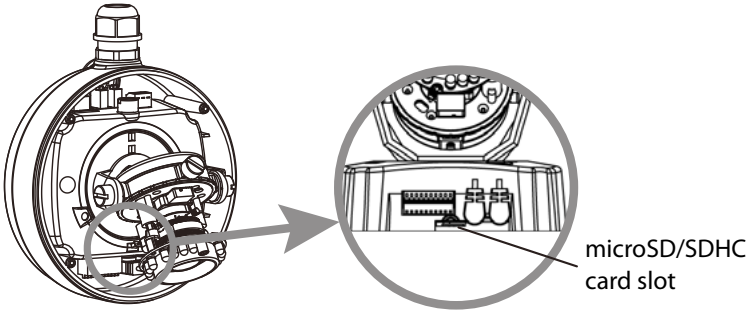


7. Having obtained the optimal result, re-install the top cover to complete the operation.

Change SD Memory Card

The camera comes with a 4GB microSD card pre-installed inside the housing. The SD memory card is user-upgradeable. And if you like to replace it, refer to the steps below that explain the procedure.

1. Loosen the fixing screws on the top cover and remove the top cover.
2. Locate the microSD card slot below the camera's LED status indicator. Unplug the digital IO cable and audio cables from the camera, and then push the pre-installed SD card gently to release it.
3. Pull the SD card out and insert a new one into the slot, and re-connect the digital IO cable and audio cables. Finally, re-install the top cover to complete the upgrade.



Operation

Access the Camera

Find Out the Camera's IP Address

Using the iWizard setup utility to search for your Compro IP camera on the LAN network is the easiest way to find out your camera's IP address, as the IP address of your camera will be revealed in the search result.

To start searching for your camera using iWizard, double-click on the iWizard icon (or tap Start > Programs > ComproView > iWizard) to launch the iWizard setup utility. Then select your language and a camera model, and go ahead to scan for all the available Compro IP surveillance products installed on your LAN network. The scanning generally takes around 1 minute to complete, and once the scanning completes, you shall see your Compro IP camera and its IP address on the list. Then you can double-click your camera on the list to view live camera video right away on the Internet Explorer.

If your camera does not turn up on the list, try performing another search. Or try connecting your IP camera directly to your viewing PC, and run iWizard again to manually configure the camera's IP address.

View Live Camera Video

After you have determined the camera's IP address, you may now:

1. Open the Internet Explorer on your viewing PC.
2. Enter the camera's IP address in the address bar. (e.g. 192.168.0.100)
3. A dialog box that requests the user name and password appears; enter a valid user name and password, and then press OK. The default user name and password are both "admin".
4. After valid user name and password are entered, Internet Explorer will prompt the installation of camera software from "Compro Technology, Inc."
5. Click on the warning message and choose to install the ActiveX. (Compro ActiveX components only support 32-bit Internet Explorer. Hence, if the viewing com-

puter system is running 64-bit version of Windows, the 32-bit version of Internet Explorer must still be used to access the camera.)

6. And then the reconfirmation dialog box will come up. Please press [Install] twice to install both the "USActiveX.cab" and "ComproClientActivex.cab" on your system.
7. Meanwhile, the Windows Security Alert dialog may appear. Please click [Unblock] to unblock it from firewall.
8. Now you can start using WebVUer on Internet Explorer to watch live video and manage IP camera.

Access the Camera over the Internet

To view camera video remotely over the Internet, one will need to:

1. Ensure that the camera's image quality setting stays within the bandwidth limit. Check the camera's image quality setting in [Setup] > [Video]. If the quality setting exceeds the upstream bandwidth limit, stuttering video or even blank screen may occur.
2. Check the network ports used by the camera by going to [Setup] > [Network] and note down the HTTP and RTSP port number, which are 80 and 554 respectively by default.
3. Enable port forwarding on the router that the camera connects to, and allow traffic on ports the IP camera is using. Consult the user manual of your router for port forwarding instructions. (When configuring port forwarding/mapping on your router, note that the public RTSP port must be equal to the internal RTSP port used by the IP camera.)

After configuring port forwarding successfully, you can now log on to the IP camera from a remote location by entering the camera's IP address plus its HTTP port number in the location field of Internet Explorer. For example, enter "http://61.220.20.16:80".

If you have multiple Compro IP cameras installed, you will need to change the HTTP and RTSP port on them manually so each one of them will use a different port. For instance, let the second camera use HTTP port 81 and RTSP port 555 and log on to "http://61.220.20.16:81" to access the second camera.

Important:
For detailed information on installation and operation, please refer to the user's manual on the installation CD .

Technical Specifications

NC3230 Technical Specifications

CAMERA	Sensor	1/3" CMOS 2-megapixel sensor
	Lens	Vari-focal, f 3~9 mm, F1.2~2.1, auto iris, megapixel, IR-corrected
	Zoom	3X optical, 10x digital (total 30x)
	Angle of View	31.7° ~ 93°
	Day/Night	Automatically controlled Infrared-cut filter, 18 built-in IR LEDs (effective 20m)
	Min Illumination	IR Mode: 0 lux with IR LEDs on in darkness Color Mode: 1.0 lux
	Shutter Time	1/5 ~ 1/16000 Sec.
	Camera Angle Adjustment	360° Pan (-180°~180°), 120° Tilt (30°~150°), 360° Rotation
VIDEO	Video Format	M-JPEG, MPEG-4, H.264
	Resolutions	160x120, 320 x 240, 640 x 480, 1280 x 720, 1280 x 1024, 1600 x 1200
	Frame Rate	Up to 30 frames at 1280 x 720 (720P) Up to15 frames at 1600 x 1200
	Video Streaming	Multiple video streams
	Dynamic Control	Active bandwidth management, activity adaptive streaming
	Image Settings	Adjustable image size and quality AGC, AWB, AES Configurable brightness, saturation and sharpness
AUDIO	Compression Format	G.711 PCM 64 Kbit/sec, bi-directional audio streaming
	Audio Input / Output	3.5 mm phone jack, mic-in x 1, line-out x 1
System Integration	Sensor In / Alarm Out	In x 2, relay out x 2, terminal block line out
	Intelligent Analytics	Motion detection, tampering detection, loitering detection, audio detection, multi-zone/sensitivity

System Integration	Triggering Event	Analytics, schedule, I/O, network failure
	Triggering Reaction	SMS, snapshot, local/remote recording, e-mail, FTP, alarm output, ComproView® notification
	SDK	Yes
Local Storage	Local Storage	Built-in microSD slot
	Format	AVI (audio incl.), by events or schedule; JPEG, file name format customizable
Network	Protocols	3GPP, ARP, DDNS, DHCP, DNS, FTP, HTTP, ICMP/IPv4, IGP, NTP, PPPoE, QoS, RSP, RTSP, SMTP, SSL, TCP/IP, UDP, UPnP
	Ethernet	10/100 Base-T, autosensing, RJ-45
	User Group	2 levels, unlimited users, ID/password protected, max 10 simultaneous users
	Diagnostics	Auto connectivity diagnosis, auto bandwidth detection, iWizard
Remote Surveillance	Mobile Surveillance	M-JPEG, 3GPP over Android, BlackBerry, iPhone, Windows Mobile (features vary)
	Web Surveillance	16-CH WebVUer over Internet Explorer, Chrome, Firefox, Safari (features vary)
General	Unit Configuration	Rebooting, factory default, date/time synchronization, user profile management, firmware upgrade, OSD, multilingual UI
	User Authentication	ID, password
	Firmware	HTTP mode
	OSD	Text or image overlay, 4 locations
	Language	Chinese Traditional, Chinese Simplified, German, Spanish, English, Japanese, Portuguese, Russian, Turkish, Ukrainian, Bulgarian
	Regulatory	CE, FCC
Mechanical	Weather Resistance	IP66
	Dimensions	Ø 160 x 135 mm
	Weight (Net)	1140 g (2.52 lb.)

Electrical	Input Voltage	DC 12V, or PoE (Power-over-Ethernet)
	PoE	IEEE 802.3af Class 3
Environ-mental	Operating Temperature	-20~50 ºC / -4~122ºF
	Humidity	20~80% RH non-condensing
Browsing Requirement	OS	Microsoft Windows XP SP3, Vista SP1, 7 (x86/x64)
	Processor	Intel 2.8 GHz, 2GB RAM
	Web Browser	Microsoft Internet Explorer 8.0 or above, non-IE browsers require 3rd-party VLC plugin

* Specifications are subject to change without prior notice.

Technical Support Information

Contact Compro Technical Support

If you need any technical support, fill out the online form (http://comprousa.com/en/form.htm) or directly email to support@comprousa.com.

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